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United States Department of Agriculture | Forest Service | Fishlake National Forest, Richfield Ranger District, Fax: (435) 896-9347 | 115 East 900 North, Richfield, UT 84701, Phone: (435) 896-9233

File Code: 1950/2820
Date: April 8, 2002

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Salt Lake City, UT 84114-5801

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DIVISION OF
OIL, GAS AND MINING

I have enclosed a copy of an Environmental Assessment (EA) for the Paradise Management Inc. Clay Mine Expansion. You provided comments in response to a July 2001 scoping letter or otherwise asked to be kept informed on the project.

The EA describes and analyzes two alternatives. One is a "No Action" alternative, in which the Forest Service would recommend to the Bureau of Land Management that the proposed operating plan to expand the mine by five acres not be approved. The other alternative is the "Proposed Action" in which the Forest Service would recommend approval of the proposed operating plan with mitigating measures that address issues raised in the scoping and analysis process. The EA addresses possible environmental impacts and describes how this action would be expected to affect the biological, physical and social resources on the Fishlake National Forest.

The responsible official is Mary Erickson, Forest Supervisor, Fishlake National Forest, in Richfield Utah, who will issue a Decision Notice based on this analysis. The comment period for the EA is 30 days, starting with publishing notices about the availability of the EA in the newspapers of record, which we expect on **April 10, 2002**. Responses received during this period will be used in preparation of the response to comments and the Decision Notice.

You may send your comments to: District Ranger
Richfield Ranger District
115 East 900 North
Richfield, Utah 84701

Comments received in response to this solicitation, including names and addresses of those who comment, will be considered part of the public record on this proposed action and will be available for public inspection. Comments submitted anonymously will be accepted and considered; however, those who submit anonymous comments will not have standing to appeal the Forest Service Decision Notice under 36 CFR Part 215. Additionally, pursuant to 7 CFR 1.27(d), any person may request the agencies to withhold a submission from the public record by showing how the Freedom of Information Act (FOIA) permits such confidentiality.

Persons requesting such confidentiality should be aware that under FOIA, confidentiality would be granted in only limited circumstances, such as to protect trade secrets. The Forest Service will inform the requestor of the Agency's decision regarding the request for confidentiality, and where denied, the Agency will return the submission and notify the requestor that the comments may be resubmitted with or without name and address within five (5) days.

If you have questions or comments please contact Steve Winslow at 435-438-2436.

Sincerely,

D. Fred Houston Jr.

D. FRED HOUSTON, Jr.
District Ranger

Enclosure

m/031/002

USDA

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United States
Department of
Agriculture

Forest
Service

April 2002

Environmental Assessment

Clay Mine Expansion - Paradise Management Inc.

Richfield Ranger District, Fishlake National Forest
Piute County, Utah

Legal Description: Township 27 South, Range 2 West,
Section 2, SE¼; SLBM

For Information Contact: Steve Winslow
435-438-2436

APR 15 2002

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SUMMARY

The Proposed Action is for the Fishlake National Forest to recommend that the Bureau of Land Management approve a mining plan by Paradise Management Inc. to remove clay from a new five-acre area at an existing clay mine. Special stipulations would be incorporated into the plan to address significant concerns and mitigate environmental consequences. The clay mine is located approximately five miles southwest of Koosharem, Utah, within the Richfield Ranger District (see Figures 1 and 2).

The Proposed Action would authorize new surface mining of five acres, expanding the mine site to a total of 17 acres. As leaseholder, Paradise Management Inc. retained the right to remove clay from the 160-acre lease area on which the mine is located when the land was transferred to the Forest Service from the State of Utah in 1998. The Forest Service is responsible for recommending mitigation measures in the mining plan to ensure that environmental and safety concerns identified during the environmental analysis process are addressed.

The proposed mining activity would remove existing vegetation, which is predominantly sagebrush, from the land surface. Topsoil and non-clay overburden would be moved and set aside for later replacement. The clay would then be excavated and removed from the site using a rubber-tired loader and dump trucks. Safety and reclamation mitigation measures would be incorporated into the plan of operations as stipulations, including: installation of fencing, barriers, and signs to ensure public safety; preservation and replacement of topsoil and non-clay overburden upon final closeout of the mining operation; and re-seeding and re-vegetation of all disturbed areas and restoration of pre-mining conditions as much as possible. Storm water runoff and sedimentation would be retained on-site by structures or design measures. Stipulations would also require that mining operations avoid impacts to Forest Road 069.

In addition to the Proposed Action (*Alternative 2*), the Forest Service also evaluated the following alternative:

- *Alternative 1 - No Action Alternative.* The Forest Service would recommend that the Bureau of Land Management not approve the proposal for expansion of the clay mine.

Based upon the effects of the alternatives, the Fishlake Forest Supervisor will make one of the following recommendations: recommend to the Bureau of Land Management that it approve a mining plan by Paradise Management Inc. to remove clay from a new five-acre area at an existing clay mine; or recommend that the BLM not approve the proposed plan.

INTRODUCTION

Background

The land on which the clay mine lies (SE¼, Section 2, T.27S. R.2W, SLBM) was transferred to the Fishlake National Forest as part of the *Utah Schools and Lands Exchange Act of 1998* (Public Law 105-335). Under this Act, all conveyances made in the land exchange were subject to valid existing surface and mineral leases and the United States succeeded the State as lessor for existing leases issued by the State. The mine lies on one of the two state-issued clay leases held by Paradise Management Inc. that came under federal management under the terms of the land exchange. These leases comprise about 314 acres in the east ½ of Section 2, T.27S., R.2W. Agencies responsible for management of the clay leases and mining include the Bureau of Land Management (BLM), the Forest Service, and the State Division of Oil Gas and Mining. The responsibility for lease administration lies with the BLM. Responsibility for mine plan approval lies jointly with the BLM and the State Division of Oil, Gas, and Mining. As the surface management agency, the Forest Service is responsible for recommending to the BLM whether the mining plan should be approved and for recommending mitigation measures to be incorporated into the plan to minimize impacts to surface resources.

A state clay lease was first issued for the mine area in 1970. Since that time, clay has been removed intermittently by surface mining methods using heavy equipment, including crawler tractors and front-end loaders. The surface area disturbed to date is about 12 acres. The mining operation has consisted of removing the overburden of non-clay material, stockpiling the topsoil and non-clay overburden, and then excavating and removing the clay. It has left near-vertical walls of 10-20 feet with interspersed benches in the immediate area where mining is occurring and some slopes of 50 to 70% in other areas. During final reclamation the ground surface would be re-shaped to restore the original ground contours as much as possible. The overburden and then the topsoil would be replaced over the mine area. The state and federal agencies have required a reclamation bond for the mine. The bond was updated and increased in the fall of 2000. The most recent mining and hauling activities occurred during the summer and fall of 2001.

The clay has been hauled from the mine on existing roads using dump trucks with trailers. The company responsible for hauling the clay has been required to hold a Forest Service road use permit for commercial hauling. The current permit covers about six miles of Forest Road 069 (FR 069) from the mine to the Forest boundary near the community of Greenwich. The road use permit assesses a fee based on the weight of material hauled per mile and also requires a performance bond to ensure that the operator satisfies road maintenance requirements described in the permit. The fees are used for replacement of the road surface, in this case for gravelling.

Upon taking over lease management responsibilities, the Bureau of Land Management began a readjustment process for the clay lease to make the terms of the lease conform to federal mineral leasing regulations. The royalty payment for leasing was also changed to reflect federal requirements and to make it payable to the federal government, rather than the State. As part of the readjustment process, Paradise Management Inc. was asked to provide an updated mining plan for the mine. The company has submitted information on where and how mining would

occur over the next five years, which was used as the basis for determining the environmental consequences in this assessment.

Purpose & Need for Action

Paradise Management Inc. has submitted a plan for development of clay resources, authorized under the terms of the *Utah Schools and Lands Exchange Act of 1998.* This Act extends the right to the company to mine the clay resources on approximately 314 acres of land transferred from the State to the Forest Service. As the federal mineral lease management agency, the Bureau of Land Management is responsible for administration of the clay lease and for approving the mining plan of operations. As the surface management agency, the Fishlake National Forest must review the proposed mineral activity and can recommend to the BLM that the mining plan be approved if it would conform to Forest Plan direction and if it complies with all laws and regulations governing this activity. The right to develop the clay resource in this area is subject to the Forest Service authority to manage activities to minimize and reclaim surface resource disturbance. In this environmental assessment the Forest Service has described the environmental impacts and has identified appropriate mitigation measures to lessen them.

This analysis is tiered to the Fishlake National Forest Land and Resource Management Plan (LRMP). The Proposed Action is consistent with Forest-wide direction identified in the LRMP. The Proposed Action would occur within Management Area 4B which places emphasis on the "habitat needs of one or more Management Indicator Species." The management prescription for MA-4B is found in the Forest Plan on pages IV-95 to IV-102.

Proposed Action

The action proposed by the Forest Service is to recommend approval by the BLM of a mining plan by Paradise Management Inc. to remove clay from an additional five-acre area at an existing clay mine, incorporating stipulations that address concerns and mitigate environmental impacts. The expansion would be to the east and northeast of the existing mined area (see Figure 2). The Proposed Action would allow expansion of the mine site to a total of 17 acres.

The clay mine is located approximately 5 miles southwest of Koosharem, Utah. It lies just south of Forest Road 069 and about ½ mile north of Lower Box Creek reservoir in the SE¼, Section 2, T.27S., R.2W., SLBM. It is within the Richfield Ranger District, Fishlake National Forest, Utah.

Decision Framework

The Fishlake Forest Supervisor will make one of the following recommendations: (1) recommend to the Bureau of Land Management that it approve a mining plan by Paradise Management Inc. to remove clay from an additional five-acre area at an existing clay mine; or (2) recommend that the BLM not approve the proposed plan.

Public Involvement

The proposal was listed in the *NEPA Quarterly Announcement of Projects* for the Fishlake National Forest every quarter since the spring of 2001. The announcement was posted on the

Forest's web page in the spring and summer of 2001. A project notification letter was mailed to 125 potentially interested parties and a public notice was published in the Richfield Reaper newspaper in late May 2001. Three letters were received in response to these scoping efforts.

Issues

Issues were developed based on comments by the public and other agencies, and from the Forest interdisciplinary team that analyzed the proposal.

Significant Issues

Significant issues are points of disagreement or dispute with the Proposed Action that are used to generate alternatives, prescribe mitigation measures or management requirements, or analyze environmental effects. Following are the significant issues raised during public scoping, and identification of how each was used to influence the project analysis.

1. **The creation of steep walls and slopes could create a public safety hazard at the mine. Heavy truck traffic would create safety problems for other vehicle users on Forest Road 069.**

   Issue addressed in Alternative 2 (Proposed Action) *- Stipulations would be included in the mining plan that require the operator to: (a) post warning signs at the entrance of the quarry and other public access points (Signs would be required to meet Manual of Uniform Traffic Control Devices, MUTCD, standards); (b) construct fences or other barriers as necessary to prevent vehicles from accessing the mining high wall area and other steep slopes.*

   As in the past, a Forest Service road use permit would authorize hauling of the clay on FR 069. The potential safety impacts of hauling with large dump trucks would be mitigated by stipulations in the permit that required the permit holder to post warning signs, and that would allow for regulation of the timing and number of haul vehicles to avoid high public use periods and to prevent traffic congestion. If necessary, dust abatement using water or magnesium chloride would be required to ensure public safety on FR 069.

2. **Reclamation of the mine site should be done to restore all disturbed areas to pre-mining conditions as much as possible upon cessation of mining. Restoration of pre-mining landscape and soil productivity should be emphasized.**

   Issue addressed in Alternative 2 (Proposed Action) *- Stipulations would be included in the mining plan that require the operator to: (a) seed and re-vegetate all topsoil stockpiles to protect them from erosion until they are used for reclamation; (b) restore non-clay overburden to mined areas and eliminate high walls, re-contouring the land surface to pre-mining conditions as much as possible with remaining material; (c) re-grade slopes to 20 degrees or less (about a 3:1 slope); (d) preserve, stockpile and replace topsoil over re-contoured slopes and flat areas; (e) seed all reclaimed areas with Forest Service recommended seed mix, apply composted manure or mulch to reclaimed areas; (f) require concurrent reclamation of disturbed areas no longer needed as a source of clay while mining is ongoing, and total reclamation of the entire mine site upon cessation of mining operations.*

3. **The five-acre area proposed for new mining could impact Forest Road 069. Heavy trucks hauling clay could damage the road surface.**

   Issue addressed in Alternative 2 (Proposed Action) *– Mining under the Proposed Action would not encroach upon FR069 to the extent that it would cause physical damage to the road or affect traffic. The leaseholder would be required by a stipulation in the mining plan to maintain a 75-foot undisturbed buffer between the mined area and the road. The leaseholder would be required to fence or place rock or other barriers between the road and the mine area to ensure public safety.*

   A Forest Service road use permit would authorize hauling of clay on FR 069. The impacts of hauling using large dump trucks would be mitigated by stipulations in the permit that required the permit holder to be responsible for surface replacement (gravelling and grading). The permit holder would be required to apply magnesium chloride to the road surface if it were determined to be necessary by the Forest Engineer to avoid significant erosion, dust and road damage problems.

4. **Mining and hauling of the clay could cause water quality impacts.**

   Issue addressed in Alternative 2 (Proposed Action) *– The leaseholder would be required to install structures or otherwise design mining activity so that all runoff from disturbed areas at the mine is retained on-site. About 80 percent of the existing disturbed area and all of the proposed expansion area would drain into the floor of the clay mine, which is at a level lower than the surrounding terrain. Consequently, almost all of the runoff from the disturbed area flows into and remains on site until it evaporates or percolates into the ground. Runoff from about two acres of the existing mine area has the potential to run off the site and into the roadway and ephemeral drainage on the west side of the mine. The leaseholder would be required to develop a small retention structure or pond to hold runoff from this area and to maintain the existing earth berm along the west side which prevents storm water from leaving the site.*

   Interim reclamation measures would include seeding of topsoil stockpiles to establish vegetation to reduce the potential for loss of topsoil.

   The road use permit holder would be required to take actions to reduce sedimentation from the road surface including graveling and magnesium chloride applications as determined to be necessary by the Forest Engineer. The holder would pay for these measures as part of the road use surface replacement fee collected under the terms of the road use permit.

Other Issues

The following issues were identified from public scoping and interdisciplinary team review but were determined to not be affected by, or have an effect on, the Proposed Action:

1. Conduct on-site monitoring to determine the possible presence of any threatened, endangered or sensitive plant species that might be disturbed by mine expansion.

Response: *A Biological Evaluation and a Biological Assessment of sensitive, threatened, endangered, and proposed threatened or endangered (TESP) plants and animals were completed for the proposal. No TESP species were found during a survey of the site. It was determined that there would be no direct or indirect effects on TESP plants or animals because of the project. The site does not provide or contain any habitat for TESP plants or animals*

.

2. The Proposed Action may create impacts to wildlife other than TESP.

   Response: *An evaluation by the District Wildlife Biologist determined that the intermittent nature of the mining activity and relatively limited extent of surface disturbance of habitat would not be expected to produce detrimental impacts to Management Indicator Species (MIS) in the vicinity of the project.*

3. Cultural resources may be impacted by the proposed surface disturbance.

   Response: *All of the area containing the proposed clay pit expansion was completely surveyed for cultural resources prior to transfer of the land from the state of Utah to the Forest Service in 1998. No cultural resources were found in the area to be disturbed - there would be no impact.*

4. Concern with possible impacts to inventoried roadless areas from this proposal or from possible future expansion or the mine.

   Response: *The clay mine and Paradise Management Inc.'s clay leases are about three miles from the nearest roadless area. Future expansion of the clay mine or development of new clay mines, if proposed and approved, would be confined to the lease area (E½ of Section 2, T.27S., R.2W., SLBM). There would be no impact to inventoried roadless areas.*

DESCRIPTION OF ALTERNATIVES

Alternatives

Alternative 1- No Action

Under the No Action alternative, the Forest Service would recommend that the BLM not approve the proposed expansion of the clay mine. The No Action alternative has been included because the National Environmental Policy Act (NEPA) requires that it be considered in all environmental documents. Selection of this alternative would not equate to a canceling of the clay lease. If the BLM were not to approve the proposal, it would be a denial of the plan to remove the clay from the proposed expansion area but it would not amount to a denial of the leaseholder's right to mine clay somewhere else on the adjoining lease area, which comprises about 300 acres to the west and north of the mine site.

Without approval to mine in the proposed expansion area, the operator would likely deepen the existing mine area until all marketable clay was removed.

If this alternative were selected, the Forest Service would recommend that all safety and reclamation mitigation measures identified under the Proposed Action be applied to future mining in the existing 12-acre mine area as part of the lease readjustment process.

A Forest Service road use permit would remain in place to authorize hauling of the clay on FR 069. The potential safety impacts of hauling with large dump trucks would be mitigated by stipulations in the permit that required the permit holder to post warning signs, and that would allow for regulation of the timing and number of haul vehicles to avoid high public use periods. If necessary, dust abatement using water or magnesium chloride would be required to ensure public safety on FR 069.

Alternative 2 – The Proposed Action

The Forest Service would recommend to the BLM that the mining plan to expand the clay mine by five acres be approved. Mitigation measures that address concerns and reduce environmental impacts would be incorporated into the new mining plan as stipulations. The Proposed Action would allow expansion of the mine site to a total of 17 acres (See Figure 2). Clay would be mined using crawler tractors and front-end loaders. Mining would consist of removing the overburden on non-clay material, stockpiling the topsoil and non-clay overburden, and then excavating and hauling the clay. Dump trucks, normally with trailers, would be used to haul the clay on FR069. Mining and hauling would be done intermittently depending on demand for the clay.

Mitigation measures would be added to the mining plan requiring the leaseholder to:

(1) Post warning signs that meet MUTCD standards at the entrance of the quarry and other public access points.
(2) Construct fences or other barriers as necessary to prevent vehicles from accessing the high wall area and other steep slopes at the mine.
(3) Seed and re-vegetate all topsoil stockpiles to protect topsoil from erosion until it is used for reclamation.
(4) Restore non-clay overburden to mined areas and eliminate high walls, re-contouring the land surface to pre-mining conditions as much as possible given remaining material.
(5) Re-grade slopes to 20 degrees or less (about a 3:1 slope) after clay has been removed where fill material is available to do so.
(6) Preserve, stockpile and replace topsoil over re-contoured slopes and flat areas.
(7) Seed all reclaimed areas with a Forest Service recommended seed mix, apply composted manure or mulch to reclaimed areas.
(8) If mining activity were to approach Forest Road 069, the leaseholder would be required to maintain a 75-foot undisturbed buffer from the centerline of the road. The leaseholder would be required to fence or place rock or other barriers between the road and the disturbed area as necessary to ensure public safety.

(9) Perform concurrent reclamation of disturbed areas no longer essential for ongoing mining operations, and conduct total reclamation of the entire mine site upon cessation of mining operations.
(10) Install structures or otherwise design mining activity so that all runoff from disturbed areas at the mine is retained on-site. Develop a small retention structure or pond to hold runoff from the west side of the mine and maintain the existing earth berm along the west side that prevents storm water from leaving the site.
(11) Prepare a hazardous spill plan as part of the mining plan that requires equipment operators to remove oil and other fluids to a proper disposal site, and identifies proper notification and cleanup requirements.
(12) Wash heavy equipment prior to bringing onto the National Forest to reduce the potential for introduction of noxious weeds to the site.

Alternatives Eliminated From Detailed Study

An alternative to use underground mining to avoid surface disturbance was considered. It was dropped from detailed study because it would not be a practical or reasonable method of removing the clay. The top of the clay lens lies at relatively shallow depths, generally with less than 10-30 feet of overburden.

ENVIRONMENTAL CONSEQUENCES

This section summarizes the physical, biological, social and economic environments of the affected project area and the potential changes to those environments due to implementation of the alternatives. The first part of this section describes the consequences for each significant issue. It is followed by a discussion of the context of the Proposed Action and the intensity of the environmental consequences in terms of 10 factors as required by the Council on Environmental Quality (CEQ) regulations.

Public Safety

Alternative 1 – No Action

The mine would remain at about 12 acres in size. However, it would be likely that the mine would be deepened much more under this alternative than under the Proposed Action. Without approval to mine in the proposed expansion area, the operator would likely deepen the existing mine until all marketable clay was removed. This would increase the height of the high walls and the steepness of the side slopes. The area where hazards would be present would not be expanded but the hazards themselves would possibly become more severe. Although the operator would be required to mitigate mine hazards, the potential for public exposure to them would exist until the mine was closed and the land surface fully reclaimed.

The leaseholder would be required to install signs, fences, and barriers as needed to warn Forest visitors of the hazards and to exclude vehicles from the steep slopes. Concurrent reclamation measures on areas that were no longer required in the mining operation would eliminate some of these hazards.

Alternative 2 – Proposed Action

The mine area would be expanded up to 17 acres over five years and there would be a corresponding increase in the area where safety hazards, such as steep walls and slopes, may be created. The leaseholder would be required to mitigate existing and new hazards by installing signs, fences, and barriers to warn Forest visitors and to prevent vehicles from accessing steep slopes. While the potential for accidents involving Forest visitors would be increased relative to the size of the active mine area, the safety mitigation measures would be expected to keep the potential low.

As the mine area expanded under this alternative, other previously disturbed sections of the mine would be reclaimed as required by the provision for concurrent reclamation partially offsetting the increase in the safety hazards caused by expansion.

Intermittent dump truck traffic traveling to and from the mine on FR 069 could increase the potential for traffic accidents. However, the low volume of private traffic on the road would offset the potential for accidents to some degree. Limited traffic count information on FR 069 from 1998 indicates that average daily traffic during the late summer may be between 60 to 90 vehicles per day. This is considered a low volume of traffic by American Association of State Highway Traffic Officials (AASHTO) standards.

Traffic safety measures would be incorporated into the Forest Service road use permit that authorizes hauling of the clay on FR 069. The potential safety impacts of hauling with large dump trucks would be mitigated by stipulations in the permit that required the permit holder to post warning signs, and other stipulations that would allow for regulation of the timing and number of haul vehicles to avoid high public use periods and prevent traffic congestion. If necessary, dust abatement using water or magnesium chloride would be required to minimize the dust hazard.

Reclamation – Restoration of Site Productivity

Alternative 1 – No Action

Because there would be no increase in the size of the mine under this alternative, reclamation efforts would be necessary only on disturbed areas within the current 12-acre mine boundary. Reclamation measures would be incorporated into the mining plan that would require the leaseholder to re-establish the pre-mining landscape by re-contouring the high banks, replacing overburden, spreading topsoil, and re-vegetating the area with grasses and shrubs. Re-vegetation efforts would be expected to be successful based on the precipitation and topsoil conditions at the mine site.

Alternative 2 – Proposed Action

Surface reclamation would be required on 5 additional acres, or a total of 17 acres. As prescribed by stipulations in the mining plan, reclamation would be done concurrently on areas no longer needed for mining and on the entire mine area upon cessation of the mining operation. The leaseholder would be required to use appropriate reclamation measures to re-establish the

pre-mining landscape by re-contouring the high banks, replacing the overburden, spreading topsoil and re-vegetating the disturbed area with grasses and shrubs. Re-vegetation efforts would be expected to be successful based on the precipitation and topsoil conditions at the mine site.

There would be an increase in the potential for soil erosion during the life of the mine. Interim measures to preserve topsoil would minimize the loss of soil productivity. Upon final reclamation it is expected that that much or all of the original pre-mining site productivity would be restored. Pre-mining wildlife and range uses should be readily re-established.

Forest Road 069

Alternative 1 – No Action

There would be no impact or potential for impact to Forest Road 069 under the No Action alternative. The current area disturbed by mining is about 100 feet from the road at its closest point. Further encroachment upon the road would not occur.

Hauling of clay would continue until all economically recoverable clay was removed from the existing mine area. Hauling would take place on about six miles of FR 069 under authorization of a road use permit. From there, hauling would take place on county and state roads. For the Forest road, the mine operator would be responsible for paying a surface replacement fee based on the number of tons of clay hauled per mile of road. Impacts from hauling would include increased dust, an increased safety hazard for other vehicles, and damage to the road from use by large vehicles. All of these impacts would be mitigated by stipulations in the road use permit, including surface replacement (gravelling) of the road surface and signing. Based on the timing of past mining at the site, mining and hauling would be done over a period of a few days or weeks each year. Consequently, the timing and impacts of hauling would continue to occur intermittently and over a relatively short-term period each year.

Alternative 2 – Proposed Action

Mining under the Proposed Action would not encroach upon FR069 to the extent that it would cause physical damage to the road or affect traffic. The leaseholder would be required by a stipulation in the mining plan to maintain a 75-foot undisturbed buffer between the mined area and the road. The leaseholder would be required to fence or place rock or other barriers between the road and the mine area to ensure public safety. The leaseholder would be required to install barriers or fencing as determined necessary along FR 069 to limit or eliminate the safety hazard to people operating motor vehicles.

Hauling of clay would continue until all economically recoverable clay was removed from the existing mine area and the five-acre mine expansion area. Hauling would be expected to occur for at least five years after approval of the mining plan. Hauling would take place on about six miles of FR 069 under authorization of a road use permit. From there, hauling would take place on county and state roads. The road use permit would require payment of a surface replacement fee based on the number of tons of clay hauled per mile of FR069 traveled. Impacts from hauling would include increased dust, an increased safety hazard for other vehicles, and damage to the road from use by large vehicles. All of these impacts would be mitigated by stipulations in

the road use permit, including requiring surface replacement (gravelling) and signing. For economic and operating efficiency reasons, mining and hauling would continue to be done over relatively compressed periods of time, generally a period of days or a few weeks each year. The timing and impacts of hauling would be expected to occur intermittently, rather than continuously over longer periods of time.

Water Quality

The clay mine lies within the 21,000-acre Box Creek watershed. Lower Box Creek reservoir is located about ½ mile south of the mine. An ephemeral wash on the west side of the mine and adjacent to the Lower Box Creek reservoir access road drains into the reservoir. The reservoir is listed as "303(d) Water Quality Limited" by the State of Utah, which means that one or more beneficial uses are not being fully supported. Beneficial uses identified by the State are boating and wading, cold water aquatic life, and agricultural uses. Total phosphorous is the pollutant of concern. Phosphorous bound to soil particles can be transported to the reservoir through natural and accelerated processes of erosion.

Alternative 1 – No Action; and Alternative 2 – Proposed Action

The leaseholder would be required to install structures or otherwise design mining activity so that all runoff from disturbed areas at the mine is retained on-site. About 80 percent of the existing disturbed area and virtually all of the proposed expansion area would drain into the floor of the clay mine, which is at a level lower than the surrounding terrain. Consequently, almost all of the runoff from disturbed areas flows into and remains in the clay pit until it evaporates or percolates into the ground. Runoff from about two acres of the existing mine area has the potential to run off the site and into a roadway and ephemeral drainage on the west side of the mine. The leaseholder would be required to maintain an existing earth berm along the west side and develop a small retention structure or pond to hold runoff from the two-acre area to prevent storm water from leaving the site.

Interim reclamation measures would include seeding of topsoil stockpiles to establish vegetation and reduction of mine area slopes that, which would also reduce the potential for sedimentation during runoff events at the mine site. Final reclamation would require re-establishment of vegetation with resulting restoration of favorable hydrologic conditions that would reduce the potential for erosion.

The road use permit holder would be required to take actions to reduce sedimentation from the road surface including graveling and magnesium chloride applications as determined to be necessary by the Forest Engineer. The holder would pay for these measures as part of the road use surface replacement fee collected under the terms of the road use permit. These mitigation measures would reduce the potential for sedimentation caused by hauling.

These measures would greatly reduce the potential for sediment delivery from the mine site and road. The Proposed Action would consequently not be expected to affect the water quality of Box Creek and Lower Box Creek reservoir.

Context of the Proposed Action and Intensity of Environmental Consequences

Regulations by the Council on Environmental Quality (CEQ), 40CFR1508.27, require that the significance of the Proposed Action be considered in terms of context and that the intensity or severity of the environmental consequences be evaluated in terms of 10 factors listed below.

CONTEXT

The Proposed Action would cause no significant adverse consequences at the national, regional, or local levels. Mining and hauling would be expected to occur intermittently. Clay has been mined, hauled and stockpiled over a relatively short-term period each year and that pattern is expected to continue. Based on the history of the mine, demand for the clay may fluctuate and there may be years when no mining or hauling occurs. Generally, no activity occurs during the winter months when the Forest road and mine are snow-covered.

The Proposed Action describes the projected additional area to be mined over the next five years and is based on the assumption that sufficient economically-recoverable clay is present beneath the ground surface. The estimate of the amount of clay at the mine site is based only on what can be seen or is exposed at the mining wall surface. The actual extent or magnitude of the clay resource underlying the surface of the proposed mine area is not known. This, combined with the uncertainty in the demand for the clay over time does not allow for an accurate prediction of the expected duration of the operation. Consequently, mining at the site could continue for a few years, or possibly for decades. Once the clay at the existing site is completely mined it is possible that the leaseholder would explore for and eventually develop other clay sources on the lease area, which encompasses about 300 acres to the north and east of the existing mine.

One consequence of the proposed mine expansion would be an additional short-term loss in soil productivity while the mining operation is ongoing. In the long term, soil productivity would be restored to at or near pre-mining levels upon final reclamation of the site.

INTENSITY OF ENVIRONMENTAL CONSEQUENCES – FACTORS

1. Beneficial and adverse impacts

A discussion of beneficial and adverse impacts is provided under each significant issue (pages 7-10).

Because of its unique chemical makeup, the clay from this mine has a value as an additive in cement. Currently, it is hauled over 200 miles to a plant near Ogden, Utah. The Proposed Action would allow for the continued mining of the clay for an estimated five years, as projected by the leaseholder and based on historical production trends. Continued clay production would produce direct economic benefits for the leaseholder and for the company and individuals involved in the mining and hauling operation. It would ultimately provide a product that helps to meet regional demand for cement.

2. Public health and safety

The effects on public health and safety are discussed under that significant issue, above.

3. Unique characteristics of the geographic area

The Proposed Action does not lie near critical areas, such as National Park land, prime farmlands, wetlands, wild and scenic rivers, roadless areas, or ecologically critical areas.

4. Highly controversial effects on the human environment

There would be no highly controversial effects on the human environment.

5. Uncertain, unique, or unknown risks

The proposed mining involves reasonable and common mining practices and is not unique. Mining has occurred at this location for over 30 years. The consequences of additional mining can be predicted. Similar mining activities occur on this and other National Forests nationwide.

6. Precedent setting

Making a recommendation to approve the proposed mining would not be precedent setting. This type of action has been done frequently for solid leaseable minerals on other National Forests. The proposed mining would apply commonly accepted practices in use in the National Forest system.

7. Cumulative impacts

The Proposed Action, by creating surface disturbance on five acres, would not be expected to have any incremental impact to any resources or beneficial uses when combined with other past, present or reasonably foreseeable future actions occurring in the 21,000-acre Box Creek watershed. The clay mine will be managed as a closed drainage basin; runoff would be contained on-site. In this sense, the surface disturbance at the mine site will have no cumulative watershed effect when considered with the effects of other surface disturbances such as roads, vegetation management, or wildfires.

The clay mine falls within the boundary of the Fishlake National Forest's Monroe Mountain Ecosystem Restoration Project. As described in the Record of Decision for the project (December 8, 2000) the Forest Service is planning to treat about 2,200 acres of vegetation in the Box Creek watershed. The vegetation treatments planned by the Restoration Project would not affect nor be affected by the additional surface disturbance of 5 acres caused by mining. Removal of 5 acres of sagebrush vegetation and temporary loss of soil productivity at the mine site would have a negligible affect on the overarching purpose of the Restoration Project—"to move the forest and grassland ecosystems within the project area toward properly functioning condition of ecological structure and function."

The Monroe Mountain Project will result in hauling of about 3.9 million board feet of timber on FR069 during the 5-year life of the Project. It is estimated that logging truck traffic would range from about 1 to 3 trips per day during the 80-day field season. Hauling of clay from the mine would occur sporadically during the field season and would, based on recent use figures, range

from 10-30 truckloads per day on the 7 ½-mile section of FR069 between the mine and State Highway 62. The number of days of use by clay haul trucks would depend on demand for the clay and could range from a few days to a month or more each field season. While there is a potential for adverse cumulative effects from traffic congestion on FR069, commercial haul traffic will be monitored and would be regulated according to the terms of the road use permits to avoid such impacts.

Hauling clay from the mine on Forest Road 069 would also not be expected to cause cumulatively significant impacts to the road itself. While hauling would create the potential for increased road damage and sedimentation, most of that potential impact would be mitigated by stipulations in the road use permits that would require maintenance of the road surface and, where necessary, surface replacement by the permit holders.

The Fishlake National Forest is planning to rehabilitate about 10 acres of disturbed land created by a past surface mining operation that took place about 1,000 feet south of the present Paradise Management Inc. clay mine. The area has only minimally re-vegetated since mining ceased over 25 years ago. The Forest will use heavy equipment to reduce overly steep slopes and will spread topsoil over as much of the area as possible to encourage plant growth. These efforts, which the Forest expects to complete by the fall of 2002, will reduce surface erosion and sedimentation at the site and will ultimately produce beneficial effects in the Box Creek watershed, and specifically in Lower Box Creek Reservoir.

8. Scientific, cultural, and historic resources

There are no scientific, cultural, or historical resources in the project area. All of the area containing the proposed clay pit expansion was surveyed for cultural resources prior to transfer of the land from the state of Utah to the Forest Service in 1998. No cultural resources were found in the area to be disturbed.

9. Threatened or Endangered species or its habitat

A Biological Evaluation and a Biological Assessment of sensitive, threatened, endangered, and proposed threatened or endangered (TESP) plants and animals were completed for the proposal. No TESP species were found during a survey of the site. It was determined that there would be no direct or indirect effects on TESP plants or animals because of the project.

10. Violation of Federal, State, or local laws

The Proposed Action is consistent with the direction in the Fishlake National Forest Land and Resource Management Plan. There would be no adverse effects to wetlands, flood plains, recreational fisheries, tribal relations, and environmental justice. No State or local laws or ordinances would be violated.

CONSULTATION AND COORDINATION

The Forest Service consulted the following individuals, Federal, state and local agencies, tribes and non-Forest Service persons during the development of this environmental assessment:

INTERDISCIPLINARY (ID) TEAM MEMBERS and SPECIALISTS WHO PROVIDED INPUT:

Kreig Rasmussen, Wildlife Biologist
Bob Campbell, Forest Ecologist
Bob Leonard, Forest Archeologist
Dan Bond, Assistant Forest Engineer
Mike Smith, Forest Soil Scientist
Dale Deiter, Forest Hydrologist
Nick Zufelt, Reclamation Specialist, Region 4
Steve Winslow, Minerals Administrator, ID Team Leader

FEDERAL, STATE, AND LOCAL AGENCIES:

Stan Perkes, Mining Engineer, Bureau of Land Management, Utah State Office
Lynn Kunzler, Senior Reclamation Specialist, Utah Division of Oil, Gas and Mining

Copies of the scoping letter for this project were sent to the following:

American Fisheries Society Paul Brouha Exec. Dir.	Amy Barry	Back Country Horsemen of Central Utah
Back Country Horsemen of Utah	Beaver County Commission	Beaver County Planning & Zoning Commision
Bert Lowry	Bill Snow	NorWest Mine Services Bob Gosik
Bureau of Land Management Jerry Goodman Richfield, UT	Calvin Christensen	Capital City Team Kathy Anderson
Carolyn Lund	Cecil H. Muir	Christopher L. Christie
Congressman Chris Cannon	Congressman James V. Hansen	Congressman Merrill Cook
Dames & Moore Cindy L. Smith	Darwin Ogden	David LeMon
David Richerson	Dept. Env. Quality/Water Quality Roy Gunnell	Dick Shepherd
Division of Indian Affairs Forrest Cuch, Exec. Dir.	Division of Wildlife Resources Darrell McMahon	Doyle Cutler
BYU -- 2-0 MLBM Dr. Duane Atwood	Eldred Smtih	Emery County Commissioners
US EPA Region VIII Env. Rev. Coord., 8WM-EA	Forest Conservation Council Bryan Bird	Forest Conservation Council John Talberth
Ashley National Forest Forest Supervisor	Dixie National Forest Forest Supervisor	Manti-LaSal National Forest Forest Supervisor
Uinta National Forest Forest Supervisor	Wasatch National Forest Forest Supervisor	Forest Guardians
Forest Guardians Lally McMahon	Fred Christensen	Garkane Power Assoc., Inc. General Manager Carl R. Albrecht
Gary Mason	George Douglas	Gov. Office of Planning & Budget
Great Salt Lake Audubon Penny Thomas Ciak	H.C. Deutschlander	Inst/Policy Res. NW Univ. Professor H. Paul Friesema

Hopi Tribal Council Chairman	Int. Assoc. F&W Agencies Mark Reeff, Res. Spec.	Jan C. Knight
Jason Ogden	Jeffrey Perkins	Jerold L. Jensen
Jerry Larsen	Jim Huffman	Jim Leavitt
Juab County Commission	Kanosh Band Representative Ralph Pikanyt	Kathy Anderson
Ken Tompkins	Kendell Jorgensen	Koosharem Band Chairman Ganaver Timican
Koosharem Band Cultural Res. Rep. Harlan Featherhat	Mayor of Beaver City	Mayor of Fillmore
Mayor of Loa	Mayor of Monroe	Mayor of Richfield
Mayor of Salina	Michael Kirkwood	Michael Pendleton
Millard County Commission	Milford Wildlife Association Dennis Miller	Monroe Mtn. Land Owners Steven J. Nielson
ONRC Susan Ash	Omar Issa	Paiute Indian Tribe of Utah Geneal Anderson, Chair
Piute County Commission	Pat O'Kelley	Public Lands Council Val Payne
Public Land Use Consultant Barbra J. Mangan	Quentin E. Utley	Randy Christensen
Representative Brad Johnson	Representative Michael Styler	Representative Tom Hatch
Res. Dev. Coord. Comm. Utah State Gov's. Office/Plan/Budget	Richfield Reaper Editor	Roger Orton
Nat. Res. Rrsch. Lib. Dir. Carla G. Heister. Utah State University	Sanpete County Commission	Senator Leonard Blackham
Senator Orrin G. Hatch	Senator Robert F. Bennett	Sevier County Commission
Sevier Wildlife Federation Kay Kimball, President	Sierra Club-Ogden Group Frank R. Chas	Six County Assoc. of Gov't. Russ Cowley Exec. Dir.
Southern Utah OHV Club	So. Utah Forest Products Assn.	So. Utah Wilderness Alliance Liz Thomas
Stan Nielson	Steven Grimshaw	Stoltze Aspen Mills Tom Twitchell
The Chicago Greens Lionel P. Treepanier	The Wilderness Society	Thomas R. Vigil
Tim Anderson	Torgerson Timber Kim Torgerson	Troy Christensen
Utah Council Trout Unlimited Bill Partner Pres.	Utah Div. of Wildlife Res. Salt Lake City, UT	Utah Div. of Wildlife Res. So. Region Jim Guyman
Utah Environmental Congress	Utah Farm Bureau Fed. C. Booth Wallentine Ex. V.P.	Utah Farm Bureau Fed. John Keeler
Utah Forest Products Steven Steed	Utah Mining Assoc. Tom Bingham Pres.	Utah Snowmobile Assoc. Curt Kennedy Pres.
Utah Trail Machine Assoc. Rainer Huck Pres.	Utah Wilderness Assoc. Dick Carter	Utah Wildlife Federation Gerald Gordon Pres.

Ute Indian Tribe Betsy Chapoose Director	Wayne County Commission	Wayne Sorensen
Western Land Exc. Project Janine Blaeloch Dir.	Wild Utah Forest Campaign	Wildlife Mgmt. Federation Len Carpenter
Wildlife Mgmt. Institute Don McKenzie		

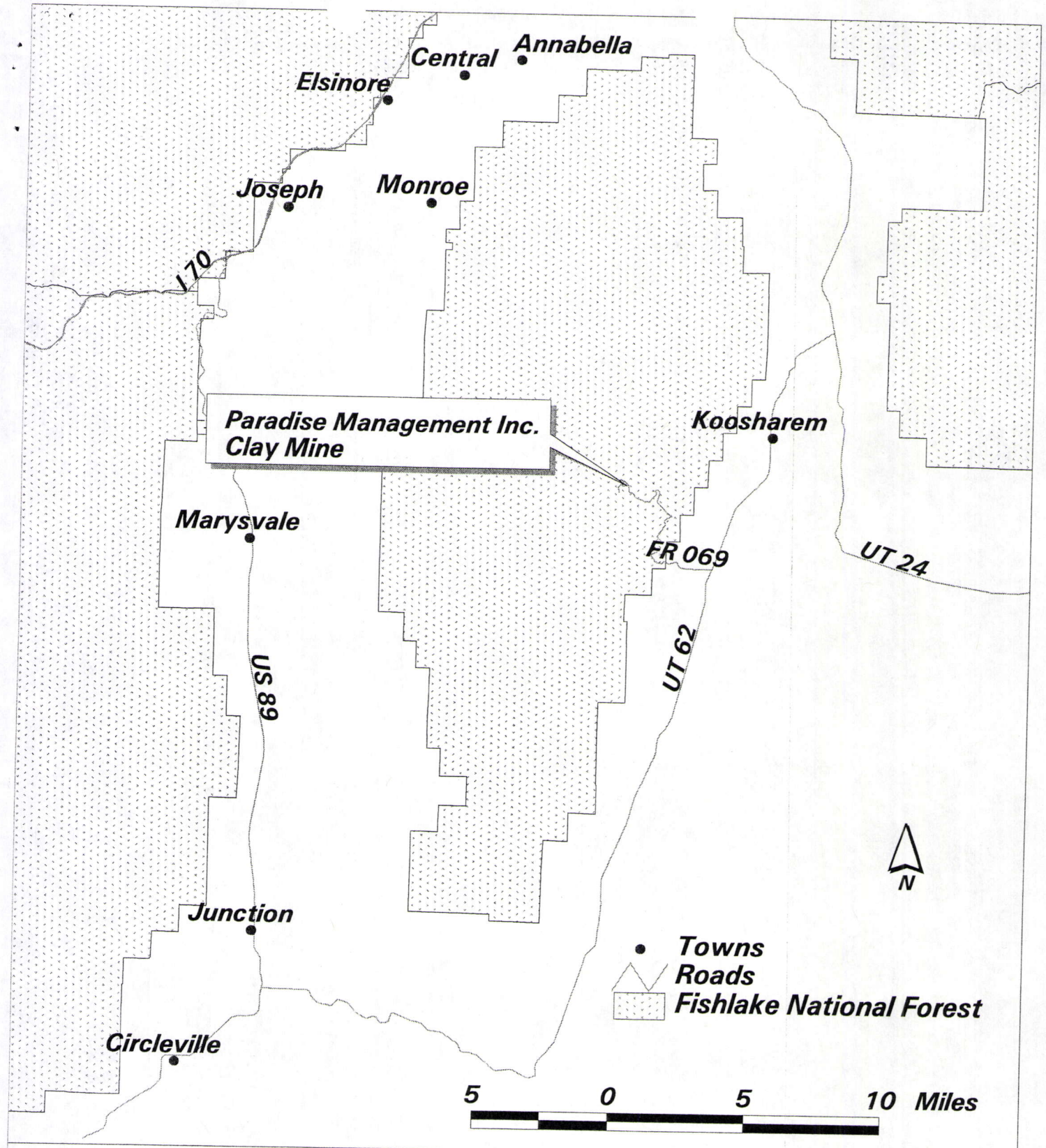

Figure 1. Vicinity Map
Paradise Management Clay Mine

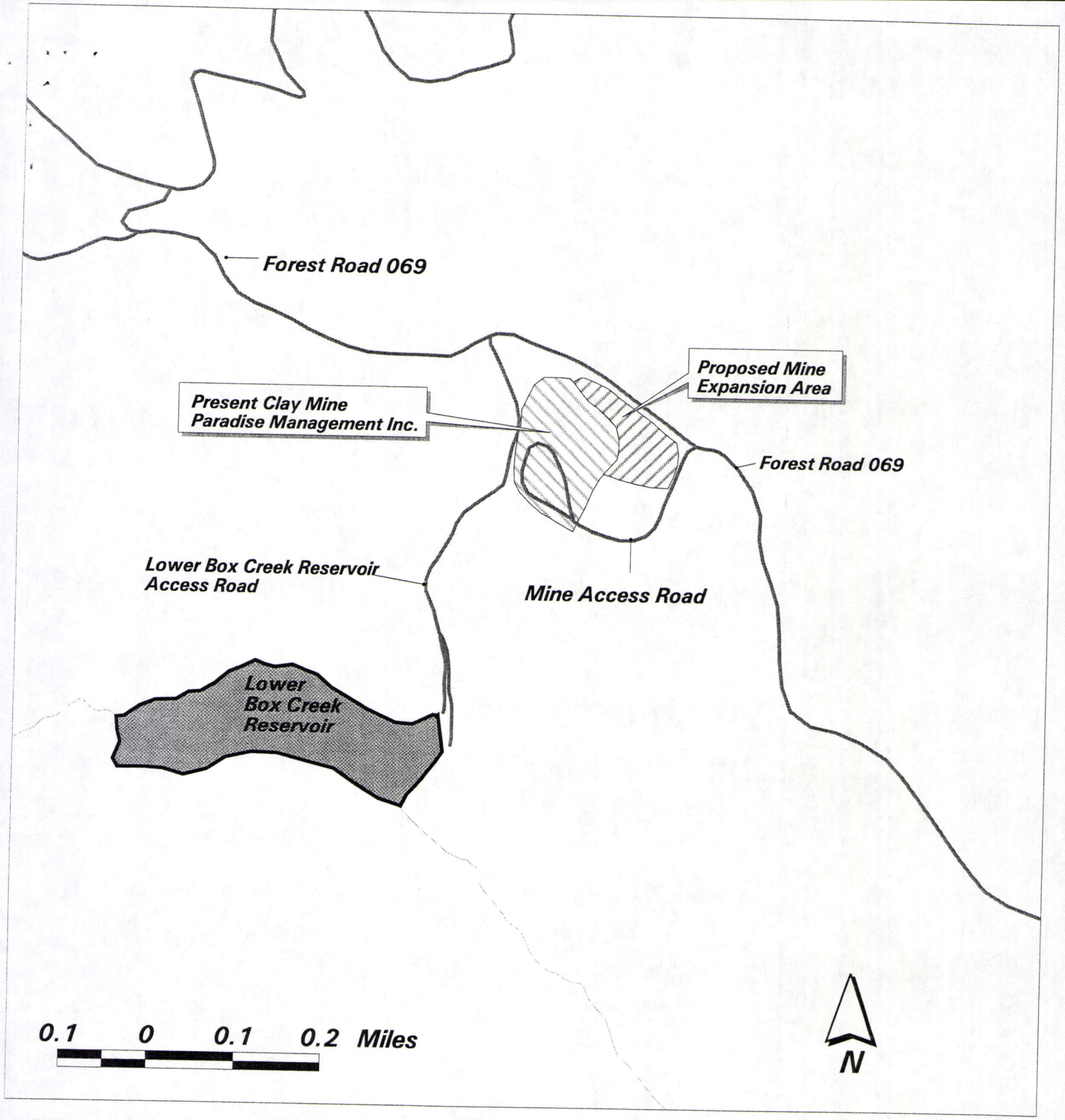

Figure 2. Paradise Management Inc. Clay Mine and Proposed Expansion Area